

00720012 0241001

```

graph TD
    101["BUY ORDER 1  
BO + DI"] -- 101-S1 --> 103["FIFO  
BO + DI (4)  
BO + DI (3)  
BO + DI (2)  
BO + DI (1)"]
    101 -- 101-S2 --> 103
    102["SELL ORDER 1  
SO - D2"] -- 102-S1 --> 104["FIFO  
SO - D2 (4)  
SO - D2 (3)  
SO - D2 (2)  
SO - D2 (1)"]
    102 -- 102-S2 --> 104
    103 -- 103-S1 --> 105{"IS  
SO - D2 <= BO + DI?"}
    104 -- 104-S1 --> 105
    105 -- 105 --> 106{"IS  
PD <= PD + 1?"}
    105 -- 109 --> 108["RESET  
FIFO"]
    108 -- 109 --> 110["NO TRANSACTION"]
    106 -- 106 --> 107["SORT  
PD (2)  
PD (1)"]
    107 -- 107 --> 108
    108 -- 108 --> 200["to 200"]
  
```

The flowchart illustrates a transaction processing system. It begins with two input paths: one for 'BUY ORDER 1' (BO + DI) and another for 'SELL ORDER 1' (SO - D2). The buy order path leads to a FIFO buffer (103) containing four entries of BO + DI, labeled (4), (3), (2), and (1). The sell order path leads to a FIFO buffer (104) containing four entries of SO - D2, labeled (4), (3), (2), and (1). Both buffers feed into a decision diamond (105) that checks if $SO - D2 \leq BO + DI$. If the condition is true, the flow proceeds to another decision diamond (106) that checks if $PD \leq PD + 1$. If this condition is also true, the flow goes to a 'SORT' block (107) which sorts PD (2) and PD (1), then to a 'FIFO' block (108) which contains PD (1) (2) and PD (1) (1), and finally to the 'to 200' output. If either decision diamond (105 or 106) is false, the flow goes to a 'RESET FIFO' block (108) and then to a 'NO TRANSACTION' block (110), which also leads to the 'to 200' output.

Fig. 2

09720013-034504

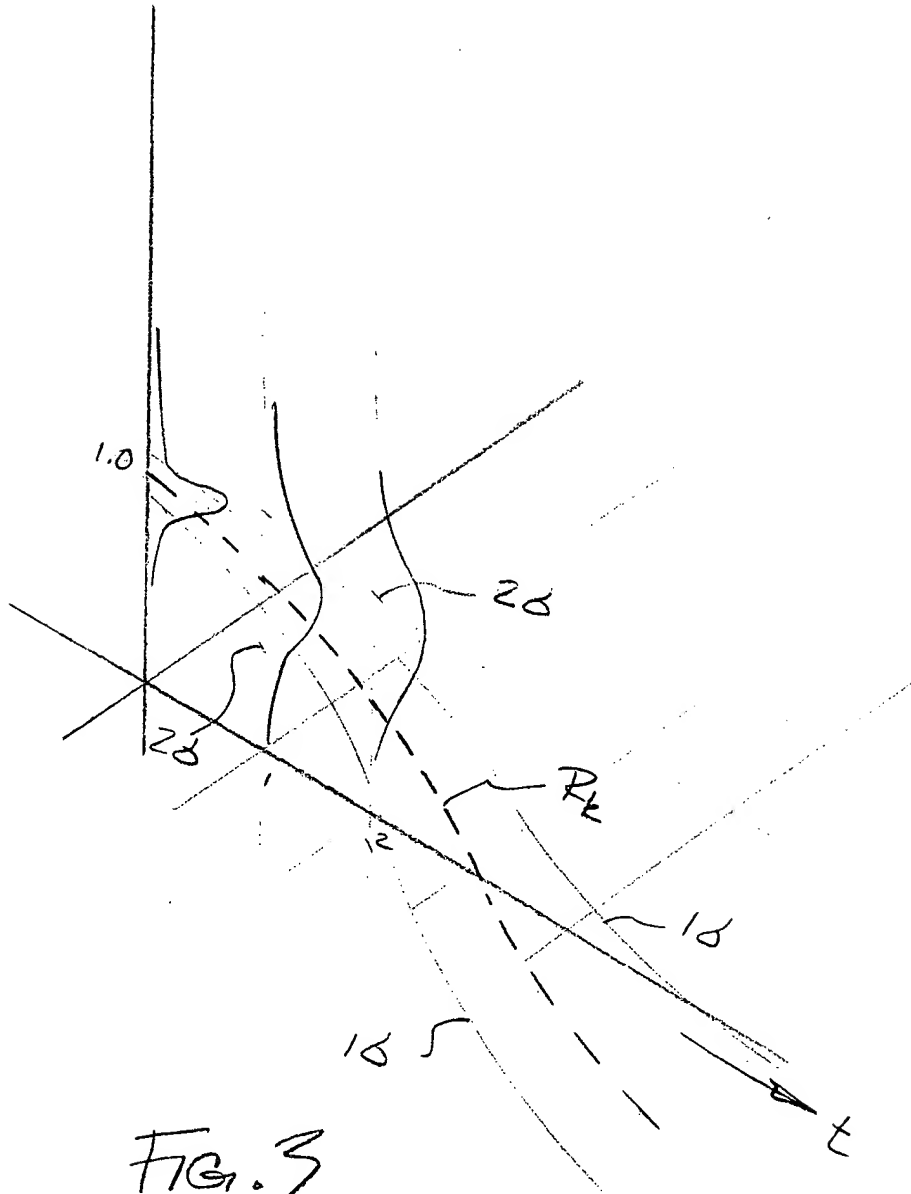


FIG. 3

105120-210260

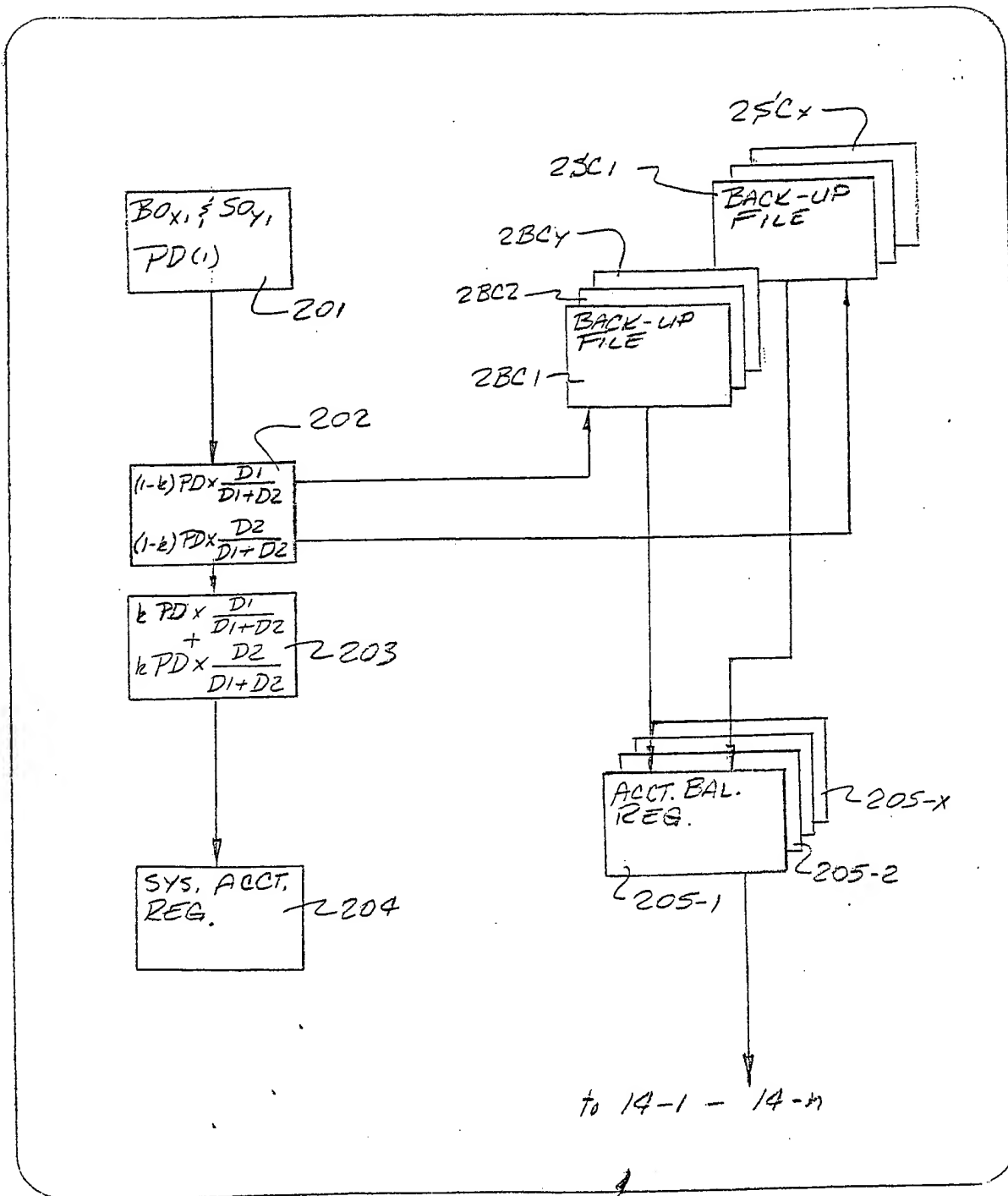


FIG. 4

105120-2100260

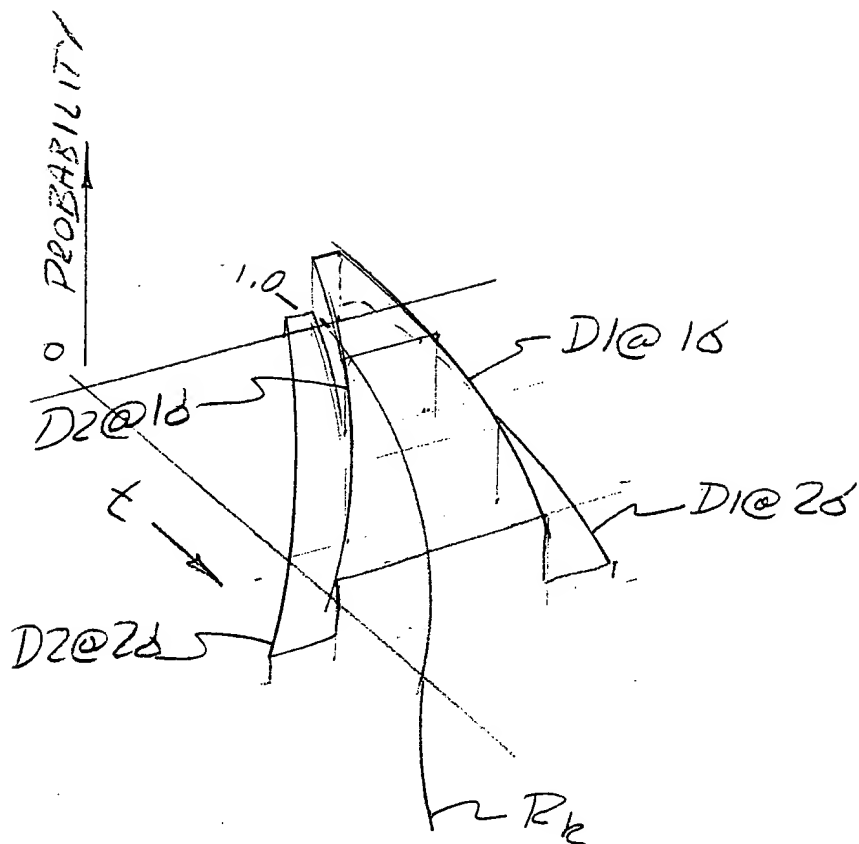


FIG 5

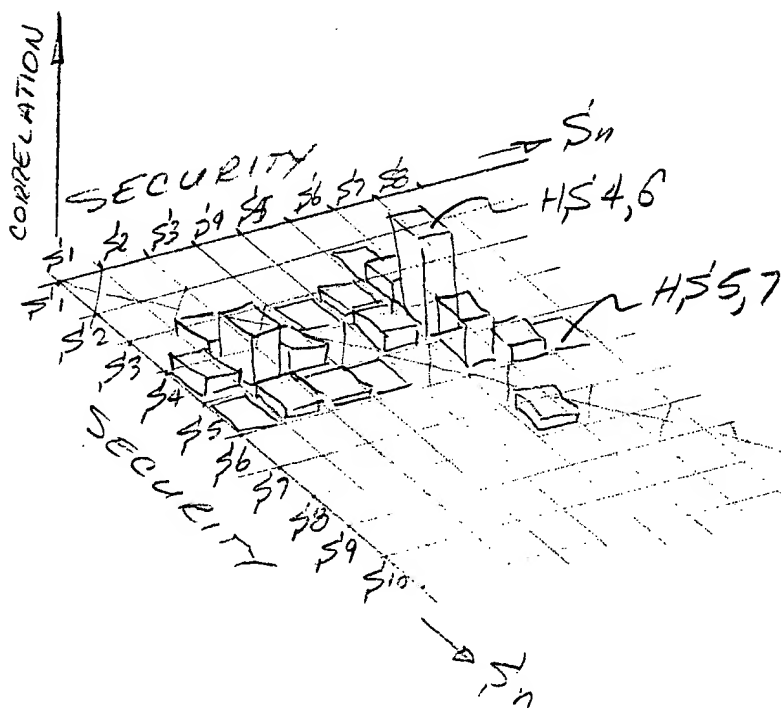


FIG 8

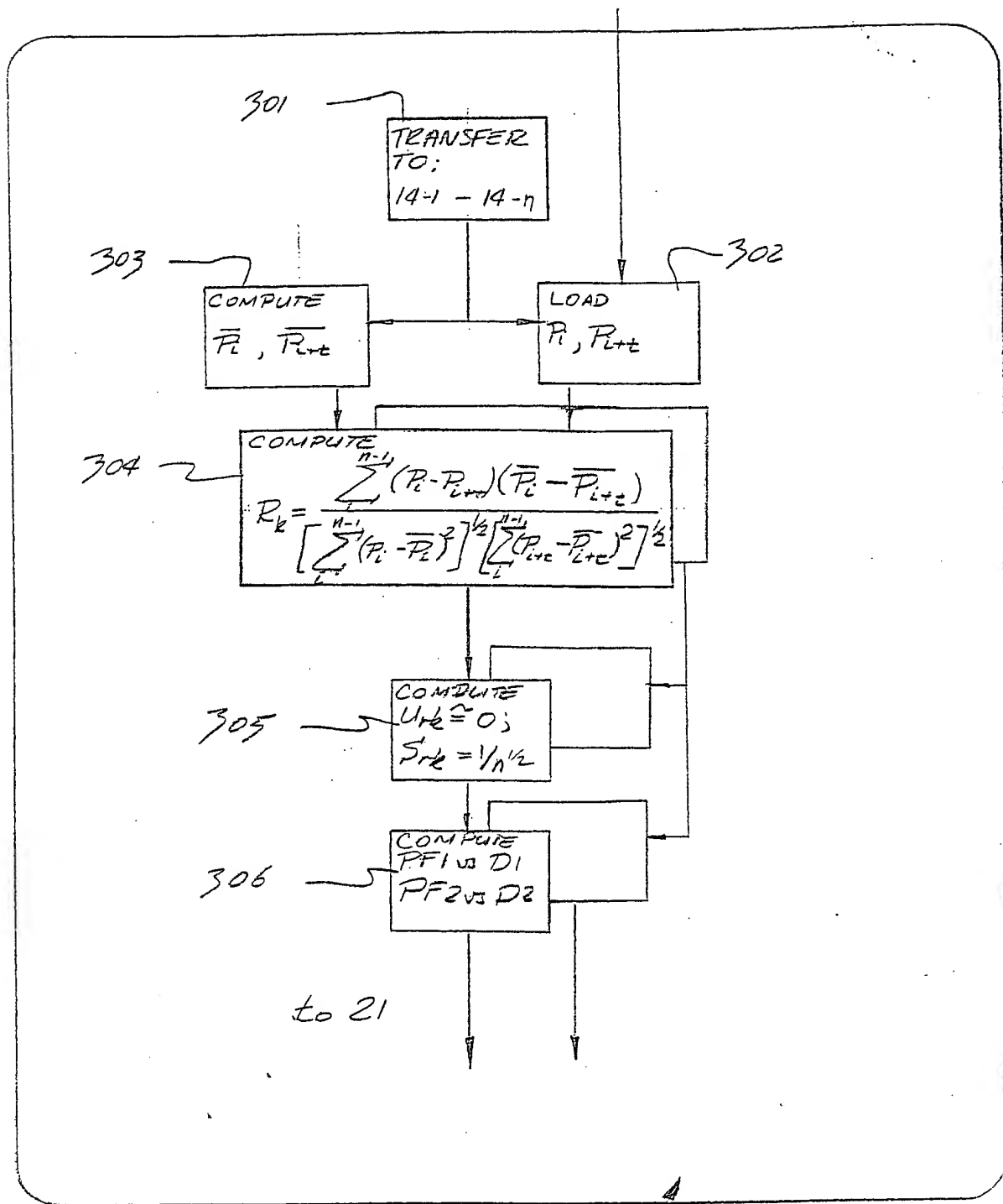


FIG 6

109729013.001601

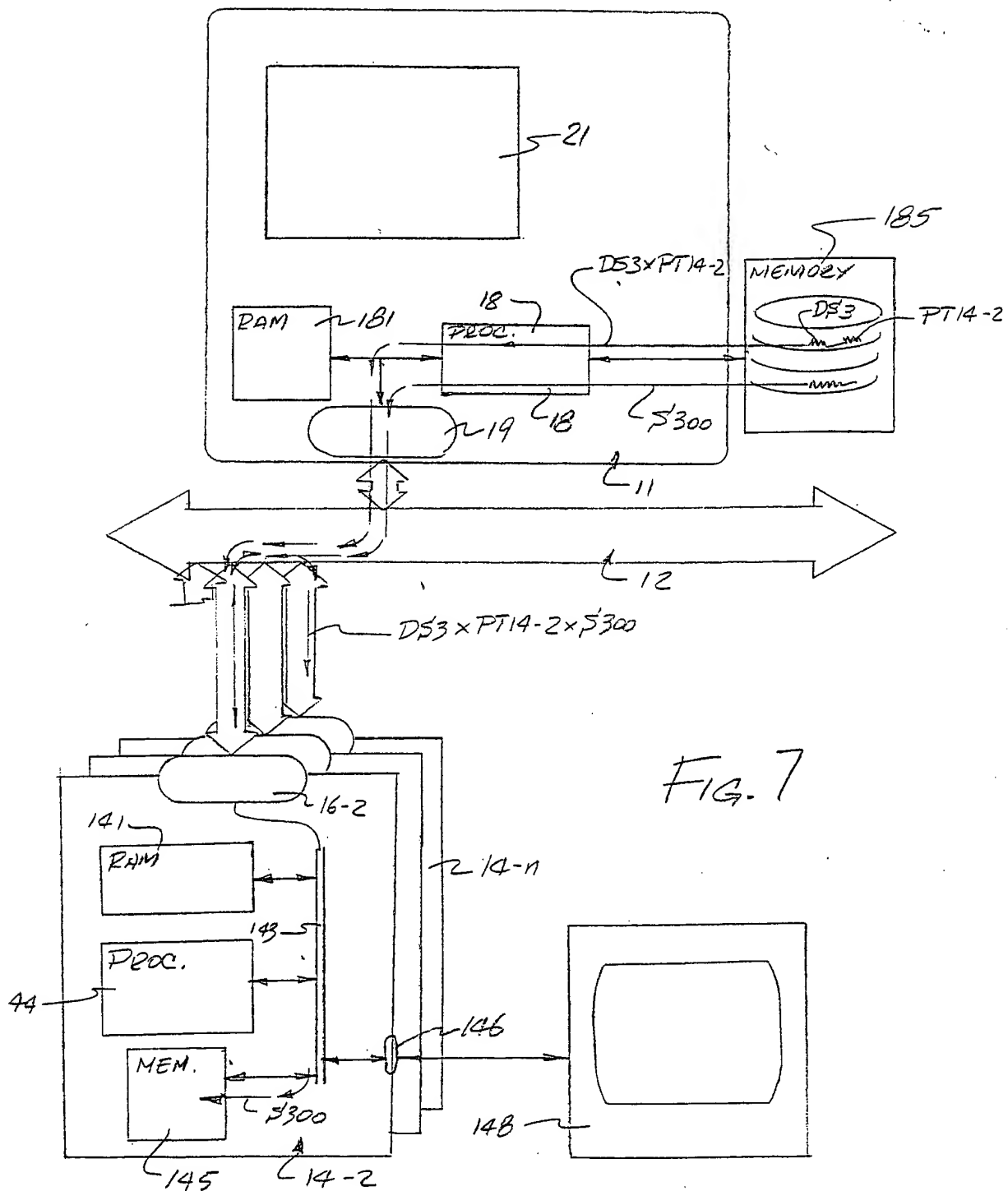


FIG. 7